satisfactory, and convenient to use. It is certainly worthy of a cordial reception by all who are interested in the progress of astronomy, and the editor should receive that cooperation which he solicits for future volumes by bringing to his notice all published articles which come properly within the scope of the work.

George C. Comstock.

Les plantes tinctoriales et leurs principes colorants. By V. Thomas (Chef des travaux de chimie appliquée à la Faculté des Sciences de Paris). Une publication de l'Encyclopédie Scientifique des Aide-Mémoire. Publiée par Gauthier-Villars, Paris, sous la direction de M. Léauté (Membre de l'Institut). Pp. 196.

The author divides the study of tinctorial plants as follows:

1. The coloring matters themselves.

2. The glucosides; the form of combination in which coloring matters exist most frequently in plants.

3. The ferments capable of decomposing these glucosides into sugars and the coloring matter.

4. The tinctorial plants themselves, from the point of view of the coloring principles which they contain.

In a previous volume in this same series, 'Matières colorantes naturelles,' the author has already discussed those natural coloring principles which belong to the keton, xanthon, and pheno-γ-pyron groups.

Part I. (pp. 7–142), therefore, of the present volume, treats of the remaining important plant-coloring principles, arranged in the following chapters:

Chapter 1. Colors of the anthraquinon group; alizarin, xanthopurpurin, munjistin, rubiadin, chrysazin and chrysammic acid, purpurin, pseudopurpurin, alkannin, morindon and ventilagin.

Chapter 2. Brasilin and brasilein; including isobrasilein, and derivatives of brasilin and dehydrobrasilin, together with a review of the work done by Perkin, Kostanecki, Herzig and others, to establish the constitutional formula of brasilin.

Chapter 3. Hæmatoxylin and hæmatein; also isohæmatein and derivatives of dehydrohæmatoxylin.

Chapter 4. Miscellaneous coloring matters, as follows: cyanomaclurin, genistein, gossypetin, rottlerin, flemingin, orcein, santalin, carthamin, lokanic acid, crocetin, curcurmin, lapachol, lomatiol, and bixin.

A brief history of every color is given, then the most interesting and important methods for obtaining it, together with its most characteristic physical and chemical properties and a discussion of its structural formula. The tinctorial properties are dealt with briefly, tables being freely employed to show change of color with change of mordant, effect of various substituting groups upon the color, comparison of shades obtained from the natural colors with those obtained from the same colors prepared synthetically, etc.

Part II. (pp. 143–180), Glucosides. Includes the consideration of the following: ruberythic acid, glucosides of quercetin and its derivatives, apiin, vitexin, morindin, datiscin, crocin, fustin, lokaonic acid.

Then follows a list of the principal tinctorial plants, arranged alphabetically according to their botanical names, and showing the coloring matters which they contain; also an alphabetical table of the coloring principles themselves, giving their melting points and the references to the text where the same are described in detail.

The references to the literature form a commendable feature of the work, thus affording ready access to the original articles.

Upon the whole, the book gives a very good digest of the work in this field and should prove of value to the chemist.

Marston Taylor Bogert.

Mosquitoes: How they live; how they carry disease; how they are classified; how they may be destroyed. By L. O. Howard, Ph.D. New York, McClure, Phillips & Co. 1901.

One of the triumphs of the combined labors of modern biologists and students of medicine is the discovery of the animal parasite of malaria and of the fact that the parasite of yellow fever, whether it be an animal or a bacterium, is, like the malarial one, transmitted by the mosquito.